

IN THE CLAIMS:

Please amend claims 4-7, and add a new claim 8 as follows:

1. (Withdrawn) A microarray chip comprising a plurality of spots arranged in a predetermined positional relationship, wherein some of the plurality of spots provide index information for specifying the microarray chip.
2. (Withdrawn) A microarray chip comprising a plurality of element spots arranged in a predetermined positional relationship, wherein spots which provide index information for specifying the microarray chip are positioned along with the element spots.
3. (Withdrawn) A microarray chip according to claim 1 or 2, wherein the spots which provide index information include spots containing a detective colorant and spots free of the detective colorant as to give index information by the presence or absence of the detective colorant.
4. (Currently Amended) A method for indexing a microarray chip ~~comprising with~~ a plurality of spots arranged in a predetermined positional relationship thereon, comprising:
~~selecting wherein~~ some of the plurality of spots ~~are used for maintaining index information as index spots;~~
~~spotting at least one biological element onto one of remaining spots as a non-index spot;~~
~~indexing the microarray chip spotted with said on-chip-element by selectively providing at least one kind of detective colorant onto the index spots based upon index information which includes a type of said on-chip-element and a corresponding location of said non-index spot on the chip; and~~
~~automatically identifying the microarray chip by detecting said detective colorant provided on said index spots.~~
5. (Currently Amended) A method for indexing a microarray chip ~~comprising with~~ a plurality of spots arranged in a predetermined positional relationship thereon, comprising:
~~selecting wherein~~ some of the plurality of spots ~~are used as index spots; for~~

maintaining index information

spotting at least one biological element onto one of remaining spots as a non-index spot;

indexing the microarray chip spotted with said on-chip-element by selectively providing at least one kind of detective colorant onto the index spots based upon index information which includes a type of said on-chip-element and a corresponding location of said non-index spot on the chip; and

reproducing the index information is reproduced by detecting the presence or absence of [[a]] said detective colorant provided on the index spots thereby automatically identifying the microarray chip.

6. (Currently Amended) A method of indexing a microarray chip according to claim 5, wherein ~~information detected at the index spots is realigned into~~ are arranged in a two-dimensional matrix including some of the index spots designated as parity spots and provided with said detective colorant based upon a parity algorithm running by row and by column of the matrix, and

upon reproducing the index information, and part of the parity spots are checked for errors information of the realigned two-dimensional matrix is used as parity information.

7. (Currently Amended) A method for indexing a microarray chip according to claim 4, further comprising the steps of:

constructing a database for storing an element information record, a microarray chip master record, and an on-chip-element information record;

recording information of [[a]] said on-chip-element on the element information record where with an element index is used as a master index;

recording information of the microarray chip on the microarray chip master record where the with a microarray index is used as a master record;

recording, on the on-chip-element information record, information of the microarray index, [[a]] said corresponding location of [[a]] said non-index spot on the microarray chip, said element index of [[the]] said on-chip-element spotted on [[that]] said corresponding location, and the information of experiment conducted and

measurement taken in said non-index of the spot;

linking the microarray chip with the microarray chip master record as well as the on-chip-element information record via the microarray index maintained by coded in the index spots, ~~as well as to the on-chip element information record~~; and

linking the on-chip-element information record with the element information record via the element index.

8. (New) A method of indexing a microarray chip according to claim 4, wherein some of the index spots are designated as parity spots and provided with said detective colorant based upon a parity algorithm, and
upon reproducing the index information, the parity spots are checked for errors.